



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
JULY 10, 2003 – 9:00 A.M.  
EXECUTIVE CONFERENCE ROOM**

*Present:* L. E. Tibbits J. Friend J. Polasek  
B. J. O'Brien C. Roberts M. VanPortFleet  
J. D. Culp R. Safford J. W. Reincke

*Absent:* S. Bower T. Fudaly

*Guests:* K. Kennedy C. Libiran F. M. Spica  
V. Zokvic

**OLD BUSINESS**

**1. Approval of the Minutes of the May 1, 2003, Meeting – L. E. Tibbits**

The minutes of the May 1, 2003, meeting were approved.

**NEW BUSINESS**

**1. Pavement Selection, US-131 Rehabilitation, CS 39014/03111, JN 50763 – K. Kennedy**

The rehabilitation alternatives considered were a rubblize and hot mix asphalt (HMA) overlay (Alternate 1 – Equivalent Uniform Annual Cost [EUAC] \$53,709/directional mile) and an unbonded concrete overlay (Alternate 2 – EUAC \$39,785/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

7".....Jointed Plain Concrete Pavement (14' joint spacing)  
1".....Bonded Breaker (Bit Mix 13A)  
9".....Repaired Concrete Pavement  
14".....Existing Base/Subbase  
Underdrain System  
31".....Total Thickness

Present Value Initial Construction Costs .....\$432,089/directional mile  
Present Value Initial User Costs .....\$109,935/directional mile  
Present Value Maintenance Costs.....\$21,307/directional mile  
Equivalent Uniform Annual Cost .....\$39,785/directional mile

**2. Revisions to Bridge Design Standards, Bridge Design Manual, and Bridge Design Guides – C. Libiran and V. Zokvic**

Design has completed numerous updates and revisions to the bridge design standards, manual, and guides. Reviews by Lansing central office and the regions have been conducted. Revisions

to the design standards will be submitted to FHWA for approval prior to distribution. Significant changes were highlighted and discussed; most revisions are minor updates or corrections to match current practice.

**ACTION:** Revisions to the standards, manual and guides are approved. They will be submitted to FHWA for their approval, followed by distribution.

3. **Research Report, *Analysis of Bystander Noise Generated by Vehicle/Road Surface Interactions* – F. Spica and J. W. Reincke**

The Keweenaw Research Center conducted an in-depth sound quality study to collect useful information about the subjective nature of tire/road surface interaction noise. The two most important outcomes of the study were that sound quality results are somewhat vehicle dependent and the critical aspect of the road surface in these evaluations appeared to be transient generators – joints or cracks in the road surface. In general, most people associated much of the other noise to be part of the overall vehicle noise and not directly related to the road surface.

**ACTION:** The research report is approved for distribution.

4. **Temporary Traffic Control Device/Change/Compliance With NCHRP Report 350 for Portable 4 ft x 4 ft Sign Design – J. Grossklaus**

The department must adopt a portable 4 ft x 4 ft sign that meets the standards and criteria of the NCHRP Report 350 crash test. Our current sign, evaluated by crash testing, does not meet the 350 criteria. The proposed sign is compliant, but requires a Type A light to be placed on the sign. Background data and previous EOC actions were reviewed. It was recommended that the proposed portable sign be adopted and that the previous compliance date be reaffirmed.

**ACTION:** The proposed portable 4 ft x 4 ft sign is approved. The implementation date of October 2004 will stand approved and contractors/agencies will be allowed to use their current stock until the October 2004 letting. Any new stock at that time will need to meet the NCHRP 350 compliant sign design.

(Signed Copy on File at C&T)

Jon W. Reincke, Secretary  
Engineering Operations Committee

JWR:kar

cc:	EOC Members	C. Libiran	D. A. Juntunen	J. Becsey (MAPA)
	Region Engineers	M. DeLong	J. Steele (FHWA)	M. Newman (MAA)
	G. J. Jeff	K. Rothwell	J. Murner (MRPA)	M. Nystrom (AUC)
	R. J. Lippert, Jr.	T. Phillips	A. C. Milo (MRBA)	
	J. Ruszkowski	K. Peters	R. J. Risser, Jr. (MCPA)	
	R. D. Till	T. L. Nelson	D. Hollingsworth (MCA)	